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ABSTRACT

This examination of turnover among college data processing personnel begins by defining "turnover" and discussing the negative consequences of excessive turnover in terms of retraining costs and reduced staff morale. It then considers seven major causes of turnover: (1) the low supply of and high demand for data processing personnel; (2) the inability of colleges to offer competitive salaries; (3) inattention to "hygiene factors," such as interpersonal relations, status, and working conditions; (4) dissatisfaction with job content; (5) poor supervision; (6) the increased willingness of the "new breed" of worker to leave the job if it interferes with his/her personal life; and (7) miscellaneous reasons, such as extended illness, over which the organization has no control. Rates of "acceptable" turnover are then discussed. Based on a 1979 survey of 289 data processing organizations, this discussion indicates that an annual 20% turnover rate should be accepted, because while necessitating standardization and training efforts, it will also prevent organizational stagnation. The report then outlines efforts undertaken by Miami-Dade Community College (FL) to reduce excessive turnover: enhancing communication; providing competency-based job structures; promoting job enrichment; improving physical working conditions; devising fair work assignments; and recognizing individual efforts. Finally, general principles for staff retention are enumerated. (JP)

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PERSONNEL RETENTION IN THE COLLEGE AND UNIVERSITY INFORMATION SYSTEMS ENVIRONMENT

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Personnel Retention in the College and University Information Systems Environment

Colleges and universities face increasing pressures to provide better services to their constituencies even as resources are increasingly limited. That statement is one with which most people in higher education agree. But we aren't agreed on which solutions are appropriate for dealing with these pressures. Most of us who are involved in computer services in higher education hold that computerized systems offer the potential to increase responsiveness and provide the individualization which new conditions force upon us. Computerized systems also have the potential to provide greater accuracy and to effect cost savings. I believe the key to fulfilling this potential (and benefiting our institutions in critical ways) is in how the information systems resource is managed; in particular, in how the people who make up that resource are managed. Without identification, recruitment, motivation, and retention of the proper people, none of the potential for meeting the challenges of the 80's can be met. Although each of these is extraordinarily important, in order to limit the scope of this paper, "retention" will be discussed, with particular care to the problem of personnel turnover in the computer services area.

Definition of Turnover

What, exactly, is "turnover"? Turnover is the metric most frequently used to measure personnel retention; a high turnover rate ordinarily means that there is some failure in the retention policies of the organization. Turnover is measured as a percentage; usually it is the percentage of an organization which has had to be replaced during the past year. A turnover rate of 25% means that 25% of the people in a given organization have left within the past year. In an attempt to standardize the term "turnover," let us note that the U.S. Bureau of Labor Statistics measures separation turnover as follows:

1) Compute the average number of employees in the reporting period by adding together the number on payroll on the first and last days of the period and dividing by two.
2) Divide the total number of separations (terminations) during the period by this average employment figure.
3) Multiply this figure by 100 to get the percentage. [1]

Turnover can be overstated by trying to annualize the percentage. ("We had 100% turnover last month. At an annual level, that means 1200%." The first statement is dramatic; the second, nonsensical.) Turnover can be understated by trying to specify "controllable" turnover. (The trouble is that classification of the reasons for turnover is highly subjective and the reasons themselves may be obfuscating.)

Problems Turnover Causes

What problems does turnover cause the afflicted organization? The biggest problem, in a data processing organization, is retraining. There are no standard work units in data processing as there is in a factory. The consequence is that most computing organizations with high turnover run at

low efficiency. Not only is the new person having to absorb new and complicated systems and procedures, but that person is more prone to make damaging mistakes. Furthermore, a new person detracts from productive time spent by peers because they are having to help the new person. Although these are universal problems throughout the information systems organization, these concerns are less damaging to the operations staff than they are to the systems staff. In the latter case, it is very common for even an experienced programmer to fail to do anything productive for six months on a new, complex job.

So turnover costs time for retraining. That time becomes propagated into missed deadlines and failed opportunities to aid in solving administrative problems. Turnover is costly, in time, in effort, and in dollars. All data processing managers will attest to the increased costs of recruiting in today's atmosphere of poor supply and high demand for computing positions. More and broader advertisement has to be made in order to get responses which were common two or three years ago. And one of the most frustrating things about this increased cost, time, and effort is that the rest of the higher education faculty and staff and administrative manning equation looks entirely different. In <u>that</u> equation, the number of applicants is usually large, even with meager advertising.

Even though costs might appear to be the most dramatic set of problems, the most pernicious effect of high turnover is in staff morale. Intuition tells us that high turnover means that we are failing to supply job satisfaction to those people who leave. In fact, research studies show that "workers who have relatively low levels of job satisfaction are the most likely to quit their jobs and that organizational units with the lowest average satisfaction levels tend to have the highest turnover rates." [2] Frequently, the remaining staff has to shoulder a heavier load because someone has left for "greener pastures." It is small wonder that the resulting discouragement causes those same green pastures to look extremely inviting!

Causes of High Turnover

What are the causes of high turnover? There are basically seven reasons which contribute to employee turnover.

1) <u>Supply and Demand</u>. Financial analysts use the term "churning" to describe frenetic activity in a portfolio--buying and selling with little net gain because the cost of transactions erodes any profits. There is some evidence that "churning" is also occurring in data processing occupations, especially those in the professional categories. The excitement of a dynamic field itself causes more and more discussion centered around new opportunity. But it is also true that many employees and others who stand to profit are encouraging increasing talk of low supply and high demand. The trade publications are full of articles about turnover, and recruitment agencies have seldom been as active as they are now. In fact, despite the sluggish recessionary state of the national economy, data processing people seem to be immune from any perception of caution. A recent survey [3] noted that 80% of all computer professionals would change jobs if the opportunity arose, regardless of economic conditions.

2) Money. Because it is a socially-acceptable reason, "more money" is the usual reason given for someone leaving a given situation. And yet, anyone who has studied the mixed record of money as a motivator knows that dissatisfaction over money is often a masking emotion. In Frederick Herzberg's theories [4], money is called a "hygiene factor," capable of causing discontent, but not capable of causing motivated performance. A poor money situation, in other words, could be the catalyst for looking elsewhere but a good money situation is neither reason alone for staying nor for going. R. A. McLaughlin, in a definitive article in Datamation [5] defines "salary compression" as a cause for leaving by noting that "...an employee who has worked somewhere for three years may find that he is earning the same as Joe College with zero experience. We know what the veteran is likely to do: add his number to the turnover statistics." Employers in higher education are particularly afflicted by "salary compression"; often restricted from giving unusual increases to on-board personnel, they also have salary ranges that have not kept pace with inflation--thus they cannot hire "Joe College" at a competitive initial salary either.

3) Other (hygienic) Job Conditions. Herzberg also describes other "demotivators" or hygiene factors which may cause someone dissatisfaction within a given environment. These include such things as interpersonal relations, status, company policy and administration, and working conditions. College and university environments frequently are very positive in most hygiene factors. A recent article in Infosystems on "Solving the DP Personnel Shortage" [6] was filled with examples of companies working on hygiene factors, among the most poignant a desire to establish a "home-town" atmosphere to attract and retain people.

4) Work Content. The best advice which any career-oriented person can receive is to seek a position which is rewarding in its work content. Numerous studies have shown the importance of interesting and fulfilling work to data processing personnel. In fact, an IDC survey [7] says that the largest cause of turnover among programmers is, simply enough, better jobs. It should be evident that no organization can offer optimum professional growth for everyone, and, hence, there will always be people seeking new employment in order to expand themselves technically or professionally.

5) Poor Management. Organizational mythology often blames the immediate supervisor for a turnover problem. "I wonder," people who have left a situation commiserate with each other, "when management will realize the source of the problem." Incompatibility with the supervisor will almost never be cited as a reason for leaving. In a Bureau of National Affairs Survey, "supervision" was only the fourth-most frequent reason for leaving (after personal problems, pay, and job opportunities) [8]. Nevertheless, poor supervision can be an important factor. As the old joke goes "I left for the sake of my health--I was sick of my boss!" What the "boss" needs to recognize is that some turnover is going to be the result of unavoidable personality differences. But some could also be the result of personal failure.

6) Work Force Changes. Some turnover, the IDC survey cited above notes, is due to the less compliant nature of the work force. People now will make job changes when their private lives are interfered with, when travel or

non-professional activities beckon, or even when they are tired of working. Some authorities talk about a "new breed" of worker, whose ties to his job or his profession are no longer enough to keep him in the same situation if anything else comes along.

7) Random Reasons. Although many of the foregoing reasons may actually be the impetus for leaving, exit interviews frequently turn up a host of random reasons, whose major common characteristic is that they do not blame the organization. To clarify as much as possible, there is ordinarily no supposition that these reasons, when given, are false ones. A move to another geographic location for family reasons, a career opportunity for a spouse causing a move, or an extended illness all are the kinds of random effects which can be hidden within the turnover statistics. So can be retirement, death, involuntary termination, or inter-departmental transfer.

Ideal Turnover

What is the ideal turnover situation? To ask that question is to imply that we do not want zero turnover; we don't want to retain all of our people forever. With all of the pressures noted above, is there a standard which accounts for avoidable and unavoidable turnover and does not lead to excess?

Although some people have said that a 6% turnover figure is "acceptable... and desirable," [9] most anecdotal figures are hair-curling: a recent Computerworld article [10] cites a 35% turnover in various technical occupations (including those computer-related) as reported in the American Electronic Association 1980 Compensation Survey. At a recent national professional society meeting, an installation with a 60% turnover rate was cited as "typical." [11] Another author in Computerworld says that "yearly turnover rates of 30% to 40% are not uncommon." [12]

Setting aside anecdotes, the figure most often cited as an acceptable standard is a traditional turnover rate of 20%. One piece of valid data is the National Salary Survey - Computer Programming, which showed a turnover rate of 21.8% in 1966 and 1968. [13] Although that study is relatively old, its conclusions seem empirically correct today, although various factors cause computer programmers to have a somewhat higher mobility rate than DP employees generally. The Datamation study of 289 installations in 1979 should also be noted. In that study a total DP staff turnover of 28% was found. Table 1 below breaks down that 28% into the different occupational categories within the computing services organization.

Occupation Type	Annual Turnover Reported
Data Entry	30%
Production Control	20%
Operations	29%
Applications Programming	34%
Systems Programming	22%
Systems Analysis	20%
Data Base Administration	8%
Data Communications	21%
Others	18%
All occupations	28%

Table 1: 1979 Datamation Survey of Computing Services Turnover

Although the clear implication in the article is that the high turnover discovered in the survey was a result of temporary professional or national economic conditions, most managers within the profession know that high turnover has been a long-term problem. If there are other short-term features pushing the rate higher, it should be remembered that the baseline rate (that rate which should be normal) is still 20%.

Aside from the fact that an expectable 20% turnover rate is still higher than what some people have termed "acceptable and desirable," what is the significance of that figure? In the college and university community, that figure is unusual. Furthermore, it is frequently not adequately communicated to responsible administrators. It may well be that the people who work within the computing services organization have particularly different management problems than most other college employees. For instance, at Miami-Dade Community College, the personnel turnover rate of all employees in 1979 was 16.4%; faculty only experienced a 7.5% turnover rate. Within the context of the other M-DCC areas, a standard turnover of 20% within Systems Analysis and Programming seems to point to a problem. So the first task is to assert that a normal turnover rate is nothing to be ashamed of. Normal turnover does imply some management activity which may not be obvious. Recruitment is going to be a constant function. Departmental operation should also be designed to cope with normal turnover; for instance, the importance of standardization cannot be stressed enough. It has never been the case that organizations could afford idiosyncratic programs or documentation, but we often forget that principle when beset by other pressures. Another example is that an active program of system cross-training ought to be routine. For that matter, normal turnover also means that training of all kinds ought to be important. And, finally, fear of turnover should not dissuade the manager from taking unpleasant disciplinary action when required.

Ironically, too low a turnover rate could also be bad. Organizations with a technical orientation need new ideas, new vigor, new ways of looking at old situations. John Diesem tells an odd story [14] of a consulting job he had in which he concluded that the installation was technically provincial because the staff had failed to upgrade its systems in several years. His summary to his client was that "you pay too well and your turnover is too low." It is remarkable the difference a few people can make who are not bound (by inertia or tiredness) to the same old way of doing things. New blood is needed because the organization that remains static in a field with as many technological changes as computing is actually going backwards.

Procedures to Reduce Turnover

Assuming the turnover rate in an organization is unhealthy, what can be done to drive it down?

Retention is a management problem. It is altogether a mistake for a responsible manager to believe himself to be buffeted about by forces outside his control. Too often, data processing managers (and not just those in colleges and universities) withdraw into a morose state when key people depart. One observer [15] assigns the major responsibility to the manager when he says that solutions to turnover "must be based on dealing with individual employees in a manner that shows the employees you are genuinely concerned about them, will help them to develop professionally, will reward them appropriately, and will help each one to make the best possible contribution...."

Without the pretense of holding it up as an ideal situation, let me illustrate by noting some of the procedures and activities we have taken at Miami-Dade Community College:

1) Communication is stressed. From the College President on down, written and oral communication is used to assure that the importance of College programs is clear to all personnel. Systems Analysis and Programming has a monthly divisional meeting and there are other frequent formal and informal meetings. A further benefit of communication is to help everyone feel that he is a part of the total enterprise.

2) Skill improvement is recognized. Systems Analysis and Programming is very proud of its competency-based job structure. [16,17] By use of this technique, people who achieve specific goals in their skill improvement program achieve specific recognition.

3) Job enrichment is attempted. There is a conscious attempt to concentrate on job values, to emphasize the rewards available to an individual in the work itself. One goal of this kind of program is to condition people to being self-motivated, or at least to achieve gratification with the knowledge that a job was well done and that the next job will pose even more of a challenge as a consequence. In specific terms, although we value detailed system knowledge, we value flexibility even more and we employ it by switching people's assignments.

4) Working conditions are pleasant. Since moving into our new building in August 1978, we have continuously sought to protect and improve the physical surroundings. We have experimented with flexible working hours and with a four-day week. Increasing use of tools of the trade (ranging from automated documentation to individual terminals to facilitative software) improve working conditions constantly. Suggestions are frequently solicited, received, and acted upon.

5) Money Adjustments are made. Despite the generally-poor financial environment within colleges, M-DCC has been able to keep its salaries close to competition. Studies of individual salaries show excellent growth patterns, produced by normal cost-of-living and longevity increments supplemented by competency-based upgrades and special increases. Salary surveys are constantly consulted in order to scale minimum and average salaries properly.

6) Work assignments are fair. I'm always very uncomfortable mentioning "fairness," because it seems like an undebatable and bland virtue. And yet, I'm convinced that organizational fairness is not that easily attained or recognized. By "fairness" in this context I mean that the needs of individual employees are recognized and that attempts are made to keep work pressures on an individual within his or her capabilities.

7) Individuals are recognized. M-DCC may be unique in the sense of appreciation which flows from everyone who is benefited by help. It is not unusual for Systems Analysis and Programming to receive three "thank-you" letters a month from different constituents within the College. Individuals who perform well are recognized internally when external acknowlegment may not occur.

Even with this kind of healthy environment, Miami-Dade's Computer Services area still experiences higher turnover than we in management would like. We hope that our discontent leads to continuous improvements in our situation, though.

Conclusions

Whatever authority I may muster on the subject of personnel retention does not come entirely from experience. There are some general principles worth passing along which, rather than being subtle special conditions applicable only at Miami-Dade Community College, should be applicable to any administrator trying to deal with personnel retention in the information systems organization.

1) A good manager monitors and tries to affect "hygiene factors." Herzberg has described these hygiene factors as pay, the possibility for growth, interpersonal relations, status, technical supervision, policies and administration, working conditions, personal life, and job security. These provide the matrix in which the real work activities can take place. Although good "hygiene" cannot motivate, poor "hygiene" can de-motivate, leading to a higher incidence of people leaving for better situations. (This is the theme of the excellent presentation on retention given by Keith Gondron at last year's CAUSE Conference. [18])

2) A good manager provides meaningful work as a motivator. It is easy for an employee to be cynical about "challenge" when the challenge is hollow. More and better responsibility will hold people, especially those you want to hold. You don't want those who cannot respond to a real challenge.

3) A good manager analyzes reasons for abnormal turnover and proposes solutions, energetically and with perseverance. Furthermore, the manager must undertake all of those activities which can help the organization survive normal turnover.

4) A good manager emphasizes the positive features of the present environment. Too often managers succumb to discouragement that they propagate at their own peril. Blind optimism is not needed, but it is certainly less harmful than gloomy pessimism.

5) A good manager recognizes and competes with the competition for organizational talent. Moping about how "industry pays more" is not going to solve anything. Technically-competent personnel can find significant advantages to employment at colleges and universities now and in the future. For that matter, the good manager also recognizes that personnel departure can be positive, in that it provides another opportunity to recruit personnel with needed aptitudes.

Undeniably, the college and university environment does offer a special challenge to retain just those people who can provide the necessary element of excellence to its administrative and academic computing. Both the projected national computer personnel shortage and the increasing difficulty in obtaining funds mitigate against any lessening of personnel pressures. Even so, the manager of the information systems resource must not forego opportunities to control turnover by all available means. Uncontrolled turnover can lead to the kind of organizational chaos which will prevent the information systems function from having its rightful influence on higher education.

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